IN THE CLAIMS:

Claims 1-16, 18-20, 22-24 and 62-64 are presented for examination, wherein claim 23 has been amended and claims 2-5 and 18-20 have previously been withdrawn from consideration. This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Previously Presented) A method of treating an individual suffering from a cancer comprising administering to the individual a therapeutically effective amount of a composition comprising an inhibitor or antagonist of reverse transcriptase encoded by L-1 (LINE-1) retrotransposon in cells of the individual, wherein cancer cells show alternative lengthening of telomeres, wherein the inhibitor or antagonist blocks lengthening of telomeres in telomerase negative cells.

2. (Withdrawn) The method of claim 1, wherein the inhibitor or antagonist of the reverse transcriptase comprises an antisense sequence, an inorganic compound, an organic compound, a peptide or a small molecule.

3. (Withdrawn) The method of claim 1, wherein the antisense sequence is capable of hybridizing with a nucleic acid encoding the reverse transcriptase.

4. (Withdrawn) The method of claim 1, wherein the nucleic acid encoding the reverse transcriptase comprises an RNA transcribed from the DNA.

5. (Withdrawn) The method of claim 1, wherein the antisense sequence comprises a chimeric RNA-DNA oligonucleotide.

6. (Original) The method of claim 1, wherein the organic compound is a nucleoside analog.

7. (Original) The method of claim 1, wherein the organic compound is a nucleoside analog, which is 3'-azido-2',3'-dideoxythymidine (AZT), 2',3'-dideoxyinosine (ddI), 2',3'-didehydro-3'-deoxythymidine (d4T) or ganciclovir or a combination thereof.

8. (Original) The method of claim 1, wherein the cancer is osteosarcoma, breast carcinoma, ovarian carcinoma, lung carcinoma, adrenocortical carcinoma or melanoma.

9. (Original) The method of claim 1, wherein the composition is administered orally, parenterally, subcutaneously, intramuscularly, intravascularly or topically.

10. (Previously Presented) A method for treating a cancer in a human, wherein cancer cells show alternative lengthening of telomeres and L-1 (LINE-1) retrotransposon encoded reverse transcriptase activity, the method comprising administering a therapeutically effective amount of a composition comprising one or more nucleoside analogs, or a pharmaceutically acceptable salt thereof, to the human suffering from the cancer, wherein said nucleoside analogs block said lengthening of telomeres.

11. (Original) The method of claim 10, wherein said nucleoside analogs are selected from the group consisting of: 3'-azido-2',3'-dideoxythymidine (AZT), 2',3'-dideoxyinosine (ddI), 2',3'-didehydro-3'-deoxythymidine (d4T) and ganciclovir.

12. (Original) The method of claim 10, wherein the cancer is osteosarcoma, breast carcinoma, ovarian carcinoma, lung carcinoma, adrenocortical carcinoma or melanoma.

13. (Original) The method of claim 10, wherein the composition is administered orally, parenterally, subcutaneously, intramuscularly or intravascularly.

14. (Original) The method of claim 10, wherein a composition comprising two or more said nucleoside analogs are administered.

15. (Original) The method of claim 10, wherein the one of said nucleoside analogs administered is from about 100 mg/kg of body weight to about 500 mg/kg of body weight per day.

16. (Previously Presented) A method of interfering with lengthening of telomeres in telomerase negative tumor cells, the method comprising administering to the cells an effective amount of an inhibitor or antagonist of reverse transcriptase encoded by L-1 (LINE-1) retrotranspòson in the cells wherein the inhibitor or antagonist is a nucleoside analog and blocks said lengthening of telomeres.

17. (Canceled)

18. (Withdrawn) The method of claim 16, wherein the antisense sequence is capable of hybridizing with a nucleic acid encoding the reverse transcriptase.

19. (Withdrawn) The method of claim 16, wherein the nucleic acid encoding the reverse transcriptase comprises a DNA, an RNA transcribed from the DNA or a cDNA reverse transcribed from the RNA.

20. (Withdrawn) The method of claim 16, wherein the antisense sequence comprises a chimeric RNA-DNA oligonucleotide.

21. (Canceled)

22. (Previously Presented) The method of claim 16, wherein the nucleoside analog is 3'-azido-2',3'-dideoxythymidine (AZT), 2',3'-dideoxyinosine (ddI), 2',3'-didehydro-3'-deoxythymidine (d4T) or ganciclovir or a combination thereof..

23. (Currently Amended) The method of claim 16, wherein the telomerase negative tumor cells are osteosarcoma, breast carcinoma, ovarian carcinoma, lung carcinoma, adrenocortical carcinoma or melanoma cells.

24. (Previously Presented) A method of preventing or inhibiting the growth of a telomerase negative cell, the method comprising:

contacting the cell with a nucleoside analog, wherein the cell shows L-1 (LINE-1) retrotransposon encoded reverse transcriptase activity and alternative lengthening of telomeres wherein the nucleoside analog blocks said lengthening of telomeres.

25-61. (Canceled)

62. (Previously Presented) The method of claim 1, wherein the composition consists of ganciclovir and a pharmaceutically acceptable carrier.

63. (Previously Presented) The method of claim 10, wherein the composition consists of ganciclovir and a pharmaceutically acceptable carrier.

64. (Previously Presented) The method of claim 16, wherein the composition consists of ganciclovir and a pharmaceutically acceptable carrier.